

Agency: Commerce, Community and Economic Development**Grants to Municipalities (AS 37.05.315)****Grant Recipient: Matanuska-Susitna Borough****Project Title:**

Matanuska-Susitna Borough - Bridge Repair/Replacement Program

State Funding Requested: \$ 3,700,000**House District: 15 - H**

One-Time Need

Brief Project Description:

Design and construction to repair or replace substandard bridges

Funding Plan:**Total Cost of Project: \$3,700,000**

	<u>Funding Secured</u>		<u>Other Pending Requests</u>		<u>Anticipated Future Need</u>	
	<i>Amount</i>	<i>FY</i>	<i>Amount</i>	<i>FY</i>	<i>Amount</i>	<i>FY</i>
Local Funds	\$400,000	fy08				
Total	\$400,000					

Detailed Project Description and Justification:

The project consists of completing the environmental, design, permitting, and construction to rehabilitate or replace 14 vehicular bridges, with the majority of the bridges located in District 15. In 2007, the Alaska DOT inspected many of these bridges and mandated that they be derated to 3 tons since the bridges' structures consist of railroad flat cars (RRFC) that are deteriorating and supported at either end rather than at the wheel base, as required. Since then, the access for emergency medical and fire, law enforcement, as well as commercial vehicles has been severely impaired. Additionally, these bridges are experiencing serious rust and cracking of their structural members, degraded rails, and they also need to have their decks completely replaced. These bridges are unsafe to use as determined by the state of Alaska. This project will replace and rehabilitate these bridges so that they, once again, are safe to use and support regular transportation and commerce.

Project Timeline:

2008-2010

Entity Responsible for the Ongoing Operation and Maintenance of this Project:

Matanuska-Susitna Borough RSAs

Grant Recipient Contact Information:

Contact Name: John Duffy, Borough Manager
Phone Number: 907-745-9689
Address: 350 E. Dahlia Ave
Email: jduffy@matsugov.us

Has this project been through a public review process at the local level and is it a community priority? ☒ Yes ☐ No



MATANUSKA-SUSITNA BOROUGH

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CY2008 Capital Project Description **Bridge Repair/Replacement Program**

1. **Project Name:** Bridge Repair/Replacement Program
2. **Project Location and House District:** Matanuska-Susitna Borough;
House Districts: 12-F, 16-H, 13-G, 14-G, 15-H
3. **Description of Project:** The project consists of completing the environmental, design, permitting, and construction to rehabilitate or replace 15 vehicular bridges throughout the Matanuska-Susitna Borough. This request for funding is in line with the Borough's overall emphasis and priority on ensuring our infrastructure is safe, promoting economic development, and providing basic transportation infrastructure for our residents.

In 2007, the Alaska DOT inspected many of these bridges and mandated that they be de-rated to 3 tons since the bridges' structures consist of railroad flat cars (RRFC) that are deteriorating and supported at either end rather than at the wheel base, as required. Since then, the access for emergency medical and fire, law enforcement, as well as commercial vehicles has been severely impaired. Additionally, these bridges are experiencing serious rust and cracking of their structural members, degraded rails, and they also need to have their decks completely replaced.

The structural behavior of these RRFCs can be somewhat predicted when the bridge is supported at its proper location. When they are not, the structural capacity of the RRFC is greatly reduced giving concern whether the bridge can even carry the load of its own weight over the long term. Furthermore, modifying the structure is not an option as the standard length is inadequate for the water crossing location and a longer structure must be installed to prevent future damage of the structure and approaches.

4. **Describe the regional benefits of the project, if any.** Fifteen years of steady population growth in the Matanuska Susitna Borough, with the accompanying residential, commercial and industrial development has increased Average Daily Traffic on all roads and bridges in the region. Bridges that are safe and strong enough to handle commercial traffic are critical to a sound, regional transportation system.
5. **Describe the public health and safety aspects of the project, if any.** The Borough has 15 bridges that are unsafe to use as determined by the state of Alaska. This project will replace and rehabilitate these bridges so that they, once again, are safe to use and support regular transportation and commerce.
6. **Amount of Funding Request:** \$3,700,000
7. **Total funding to complete the project:** \$3,700,000

8. **Number of years to complete the project; start and end dates:** 2 years May 2008 – October 2010
9. **Matching funds available/sources:** Mat-Su Borough: \$400,000
10. **If the project received prior state appropriations, list the amount and the year of the appropriation:** This project did not receive prior state appropriations.
11. **Are funds for the project included in the Governor's proposed FY2009 budget? If so, where?** Funds are not included in the Governor's proposed FY2009 budget.
12. **Are federal funds being sought, either through competitive grants or earmarks?** No
13. **Has the project gone through a public review process at the local level and is it a community priority demonstrated by resolution or other official action by the governing body?** Given the emphasis on providing sound infrastructure to Borough residents, the Mat-Su Borough Assembly approved the Borough's match of \$400,000 after receiving public input.
14. **If funding is made available for the project this year, who will be responsible for providing the ongoing maintenance and operations costs?**
The Matanuska-Susitna Borough RSAs would be responsible for continuing M&O costs.
15. **Project contact information – name, address, e-mail, phone number:**
John Duffy, Borough Manager
Matanuska-Susitna Borough
350 E. Dahlia Ave.
Palmer, Alaska 99645
jduffy@matsugov.us
907-745-9689

SUBJECT: Re-appropriating \$400,000 from the Capital Reserve Fund for Substandard and Emergency Bridge Repairs.

AGENDA OF: January 15, 2008

ASSEMBLY ACTION:

MANAGER RECOMMENDATION: Introduce and set for public hearing.

APPROVED BY JOHN DUFFY, BOROUGH MANAGER: _____

Route To:	Department/Individual	Initials	Remarks
1	Originator		
2	Public Works Director		
	Planning and Land Use Director		
	Community Development Director		
	Emergency Services Director		
3	Finance Director		
4	Borough Attorney		
5	Borough Clerk		

ATTACHMENT(S): Fiscal Note: Yes ☒ No ☐
Ordinance Serial No. 08-_____

SUMMARY STATEMENT: Fifteen bridges have been found to be structurally deficient and require immediate reconstruction and/or replacement.

The bridges were found to be deficient during a recent biennial bridge inspection conducted by the state of Alaska, Department of Transportation and Public Facilities. Other bridges were damaged as a result of the 2006 flood event.

The condition of these bridges poses immediate life, health and safety threats to many Borough citizens. These bridges provide

The bridges, locations and estimated cost for reconstruction and/or replacement are shown in Table 1.

Table 1
Substandard Bridges

Bridge Name	Community	Estimated Cost
Twins Creek	Trapper Creek	\$275,000
Cottonwood Creek	Trapper Creek	\$275,000
Little Susitna	Tanina (Moose Meadows)	\$275,000
Cottonwood Creek	Wasilla	\$275,000
Fish Creek	Knik	\$15,000
Bodenburg Creek	Butte	\$260,000
Gate Creek	Trapper Creek	\$275,000
Little Susitna	Wasilla	\$275,000
Willow Creek	Willow	\$275,000
Deneki Meadows	Willow	\$1,000,000
Kroto Creek	Trapper Creek	\$50,000
Trapper Creek	Trapper Creek	\$15,000
Moose Creek	Trapper Creek	\$50,000
Montana Creek	Sunshine	\$50,000
Montana Creek	Caswell lakes	\$275,000

\$3,350,000

It is proposed that the Assembly appropriate \$400,000 to serve as local match for state and/or federal funds to complete the reconstruction and/or replacement of these bridges. The appropriation will demonstrate the Borough's willingness to provide local match funds for these important improvements. The Assembly, by previous action, has identified the need for state funding assistance for substandard bridges and roads in its 2008 State Legislative Priorities.

RECOMMENDATION OF ADMINISTRATION: Introduce and set for public hearing.

Testimony on Local Bridge Funding Program

Thank you Mr. Chairman and committee members for providing me the opportunity to speak to you on this very important transportation topic.

For the record, my name is John Duffy and I am the Borough Manager for the Matanuska-Susitna Borough.

I know you have a tight schedule so I will be brief. I have a few prepared comments and have a short presentation I wish to provide.

Mr. Chairman, I first wish to state that we at the Matanuska-Susitna Borough are encouraged that the State Legislature and the Senate in particular are working to develop long term funding solutions for the state's transportation system. We hope that as you consider a funding mechanism for the maintaining the state's bridges and roads, that you will consider the creation of a local bridge and road program to address non-state bridges and roads that form the backbone of the state's transportation system. We believe that a local bridge and road program makes good sense and we are willing to provide a local match for such a program. Indeed, the Mat-Su Borough Assembly has already appropriated funds for such improvements.

An efficient and effective transportation is a basic requirement for a growing economy; without adequate roads and bridges our transportation system will be hampered by congestion which results in higher costs of doing business due to long travel time delays.

Other problems associated with poor bridges and roads include higher fatality and injury rates that result in higher health costs, higher insurance costs, and lower work productivity which all lead to higher overall business costs.

The costs to the citizens and taxpayers of Alaska are more dramatic as families struggle with higher health and insurance costs, and long-term injuries. Our aging transportation infrastructure is also increasing the basic cost of living. For example, there are many bridges in the Mat-Su Borough that have been de-rated by the state of Alaska due to their structural conditions. As a result, commercial vehicles such as fuel trucks, building delivery trucks, freight delivery vehicles and even ambulances and fire trucks are not able to use these bridges. We are unable to clear the bridges of snow because of the weight restrictions. Our citizens are now relying upon pick-up trucks to plow snow and snowmachines and sleds to move people should emergencies occur; many must provide their own fire response. Thus adequate investments in our transportation system at the local level are needed today to address basic quality of life standards and to maintain a strong economy.

Today I wish to focus on the poor condition of local bridges in Mat-Su. I also note that our situation is shared by other communities throughout Alaska. Local bridges in the Kenai Peninsula Borough, Fairbanks North Star Borough, Anchorage, and the Denali Borough and many of the cities within these boroughs all face similar challenges.

Please refer to page one of the presentation hand-out. The Mat-Su Borough presently maintains about 40 bridges. The maintenance and capital replacements are paid for by our local tax payers through Road Service Area taxes.

The existing bridge inspection program is conducted by the state DOT for bridges 25 feet in length or longer while the Borough completes inspections on those bridges less than 25 feet in length. Bridge inspections are conducted by both parties every two years.

The Mat-Su Borough taxpayer, like many others in other boroughs and cities, as I noted above taxes themselves for local bridge and road repair and improvements. Mat-Su taxpayers pay about \$11.2 million for local road and bridges. Much of these funds are dedicated to day-to-day maintenance, snow removal, and limited capital improvements. The Assembly recently appropriated \$400,000 for bridge repair. Unfortunately, our bridge repair needs is about \$3.6 million.

Please to pages 14 through 22 of the handout material for some typical depictions of our damaged bridges.

We respectfully request the State Legislature appropriate funds for local bridge repair with a provision or requirement for local match funds in the form of cash, materials such as gravel, right-of-way, and in-kind which will encourage local governments to match state funds and maximize local resources to help improve bridges in their area.

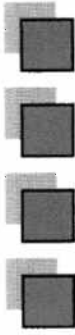
Mr. Chairman and members of the committee I appreciate the opportunity to speak with you today. We appreciate your efforts to improve the state's transportation system. This ends my comments and am available for questions.



Matanuska-Susitna Borough Bridges

John Duffy, Borough Manager

February 19, 2008



OVERVIEW

- Mat-Su Borough Bridges
 - General Information
 - Bridge Inspection Program
 - Funding Scenario
- Bridges and Estimated Costs of Repairs
- Photos Showing Representative Damages



Mat-Su Borough Bridge Information

- General Information
 - Mat-Su Borough bridge responsibilities include:
 - Twenty-nine (29) are greater than 25 feet in length
 - Ten bridges are less than 25 feet in length



Mat-Su Borough Bridge Information

- Bridge Inspection Program
 - DOT inspects Borough bridges that are greater than 25 feet in length. Borough bridges are those that are within the Borough's rights of ways.
- DOT's inspections on each bridge occur every two (2) years
- Borough's receives a comprehensive inspection report
 - If there are deficiencies noted with the bridges, the Borough is required to fund the repairs.



Mat-Su Borough Bridge Information

- Bridge Inspection Program (cont)
 - For bridges that are less than 25 feet in length:
 - The Borough utilizes consultant services for inspection of our bridges.
 - Follow-on inspections occur every two (2) years, which is also conducted by a consultant.



Mat-Su Borough Bridge Information

- Funding for Bridge Repairs and Replacements
 - DOT does not charge the Borough to inspect our bridges that are greater than 25 feet in length.
 - Funds for the bridge repairs come from each RSA budget (few can afford it).
 - Each RSA generates funds from local residents and businesses and these funds are used to fund the maintenance contracts, portions of employee salaries, replacement of road maintenance equipment, etc.
 - After these items are funded, it leaves little funds for bridges: For instance:
 - The total budget for all 16 RSAs is \$11.2M.
 - To date, we have a total requirement of over \$3.64M for bridge repairs and/or replacements.



Mat-Su Borough Bridge Information

- Funding for Bridge Repairs and Replacements
 - The situation is even bleaker if this is viewed on an individual RSA basis:
 - In FY 2007, DOT inspected Montana Creek bridge at Yoder Road and noted that a bridge member needed to be replaced
 - The cost of this project was over \$50K, and Talkeetna RSA had only \$82K that could be used for this and other emergencies of this type
 - The Deneki Meadows Bridge in Willow RSA needs to be replaced with an estimated replacement cost of \$1.0M
 - Willow's total RSA budget in FY 2008 totaled only \$532K. This is but one bridge in this RSA that needs to be replaced



Mat-Su Borough Bridge Information

- Funding for Bridge Repairs and Replacements
 - Trapper Creek's RSA has three (3) bridges at this point that need to be replaced for a total estimated cost of \$825K. Three (3) other bridges are in need of repairs for an estimated cost of \$155K.
 - The total RSA budget for FY 2008 totaled only \$139K.
 - Butte RSA has a total budget \$560K in FY 2008, and after deducting the cost of the contract and other required administrative expenses, they had approx \$199K to apply towards replacing Bodenburg Creek bridge.
 - The estimated cost to replace the bridge is \$260K, which more than bankrupts the RSA.



Bridges and Estimated Cost of Repairs



Bridges and Estimated Cost of Repairs

- To date, 15 bridges need to be replaced or repaired
 - Total estimated cost is \$3.64M
- Bridge Repair Specifics:
 - Deneki Meadows (Bridge washed away during Aug 2006 floods, affects emergency access) - \$1.0M
 - Eight (8) railroad car bridges (bridges de-rated to 3 tons by ADOT) - \$2.185M
 - One (1) bridge (cracked members, needs replacing) - \$275K
 - Five (5) bridges (needed safety and structural repairs) - \$180K



Funding

- Funding assistance is necessary to complete needed bridge safety and structural repairs.
- A state appropriation for local bridge repair and maintenance will improve overall safety for the traveling public and enhance the state's overall transportation system.
- Local bridges are part of the state's overall transportation system – they connect residential areas and businesses to the arterials and highways.



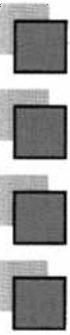
Funding

- Provide an appropriation for local bridge repairs
 - Allow local governments to match with:
 - Cash
 - Materials, e.g., gravel, concrete, rip-rap, etc.
 - In-kind, e.g., consultant expertise, equipment, personnel, etc.
- The Borough will provide a local cash match.



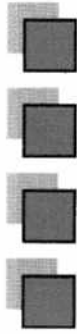


Photos Showing Representative Damages



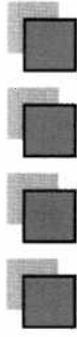


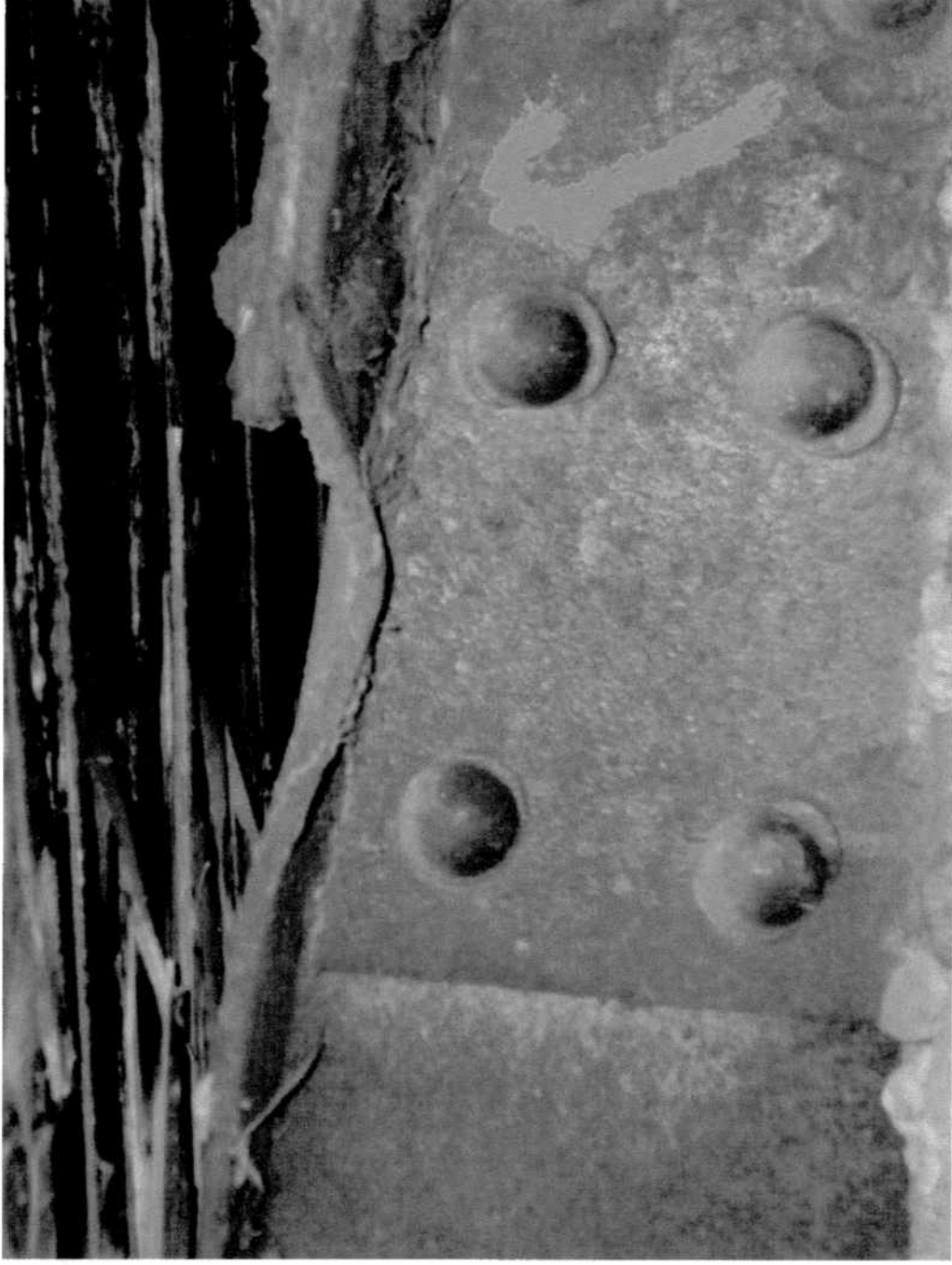
Broken rails that by design are supposed to restrain the lateral movement of vehicles and to prevent them from going over the side.





Sheet rust on the underside of the structural members that degrades the member's integrity





Cracked structural member that impacts structural integrity of the bridge

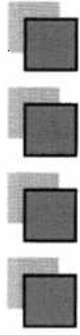




Photo Frame 0215 1E Afternoon



Photo Frame 0216 1E Afternoon

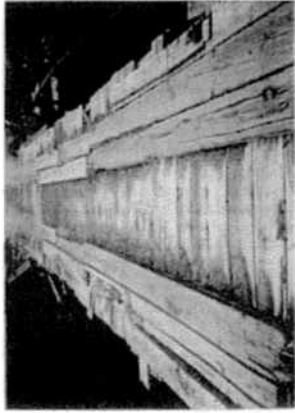


Photo Frame 0217 1E Afternoon

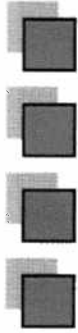
Photo Frame 0218 1E Afternoon

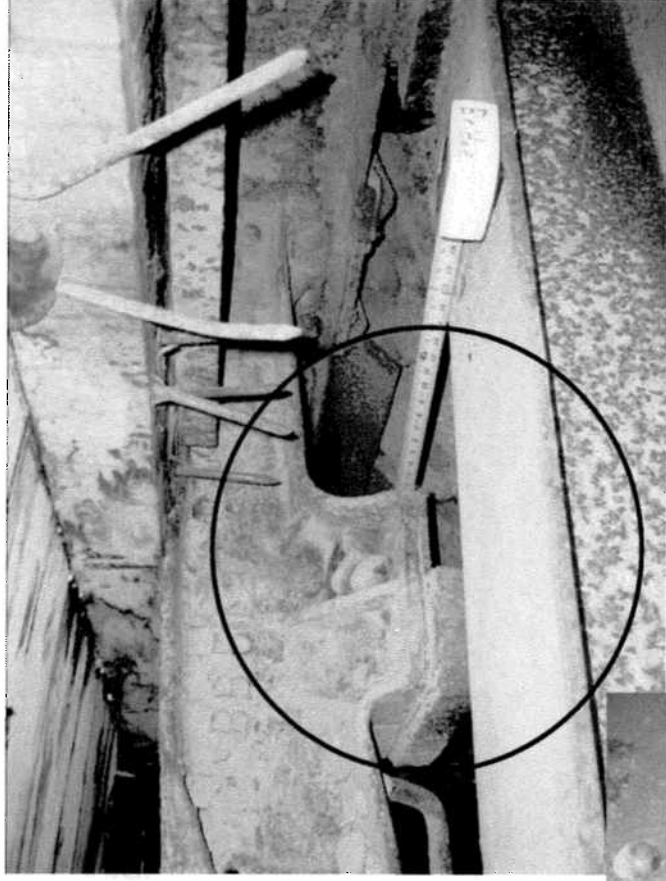
Before the August 2006 floods



After the August 2006 floods

Bridge that collapsed during the August 2006 floods...there now exists only one means of ingress/egress to this community via Shirley Town Bridge.



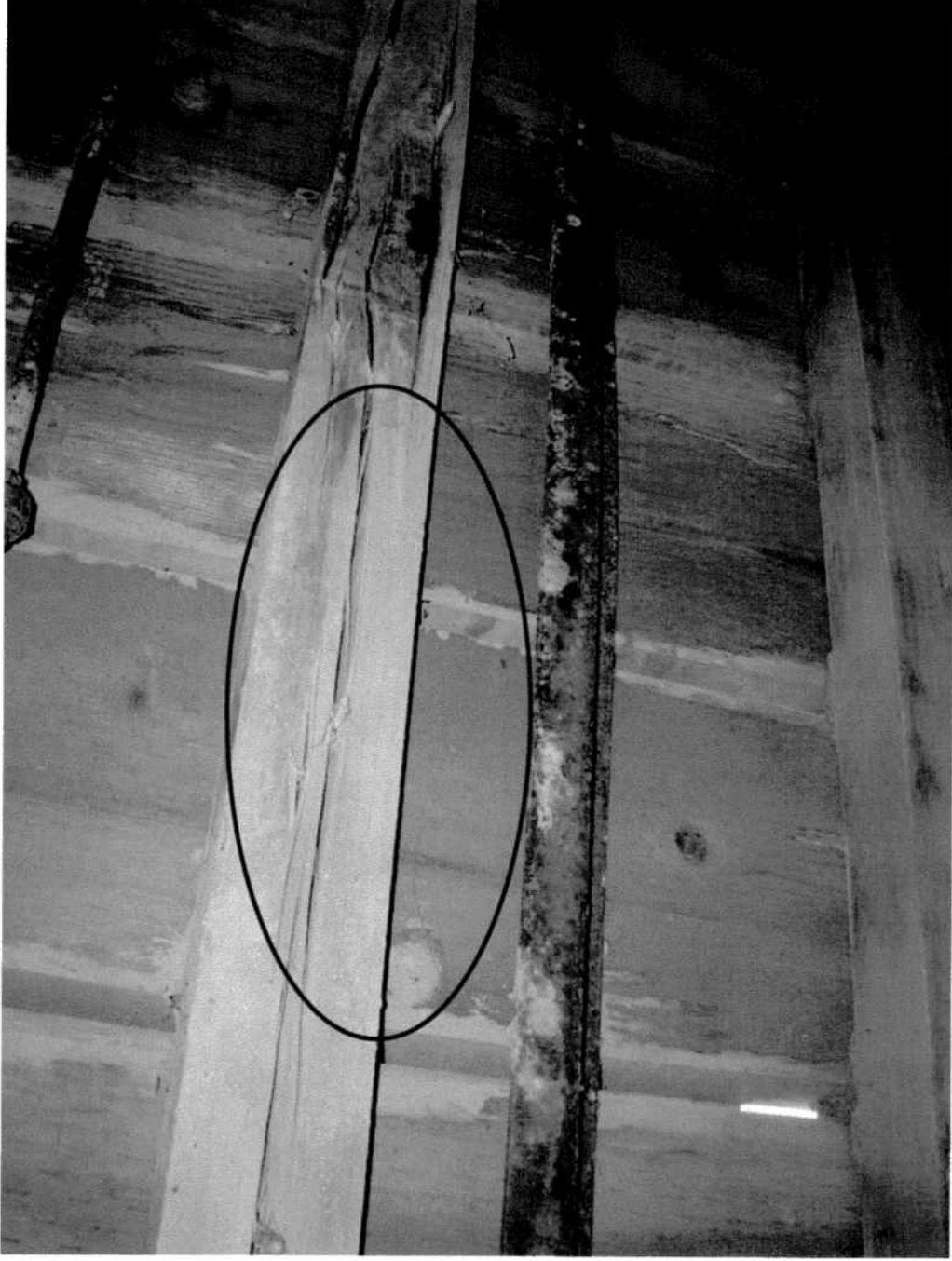


Photos showing where the railroad car is not supported at the wheel location. Because of this, the actual capacity of the bridge is undetermined. It is unknown whether the bridge can carry the load of its own weight given this scenario.



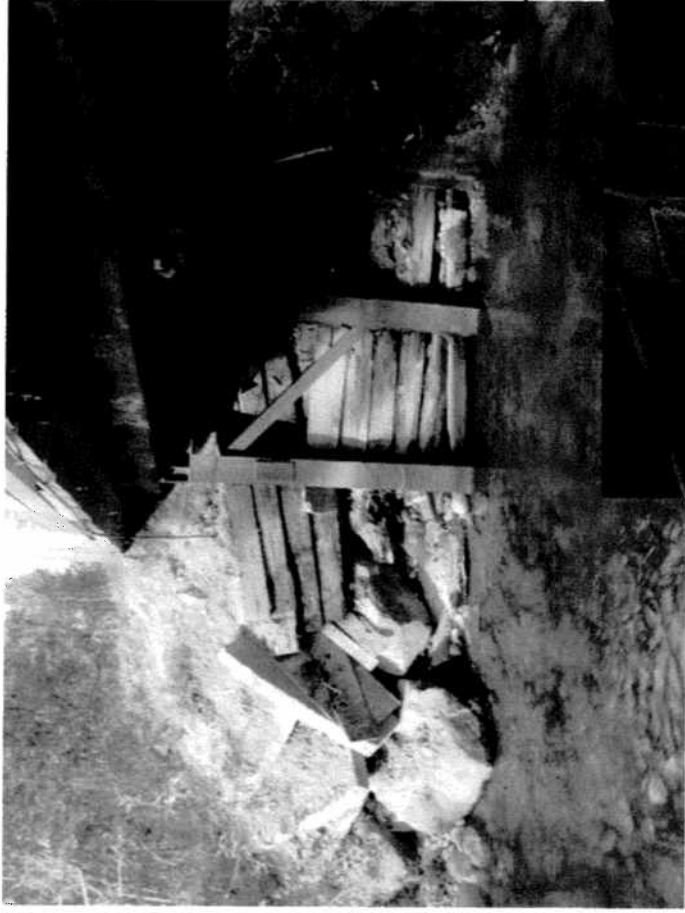
Deck surfaces that are degraded and ultimately affect vehicular safety





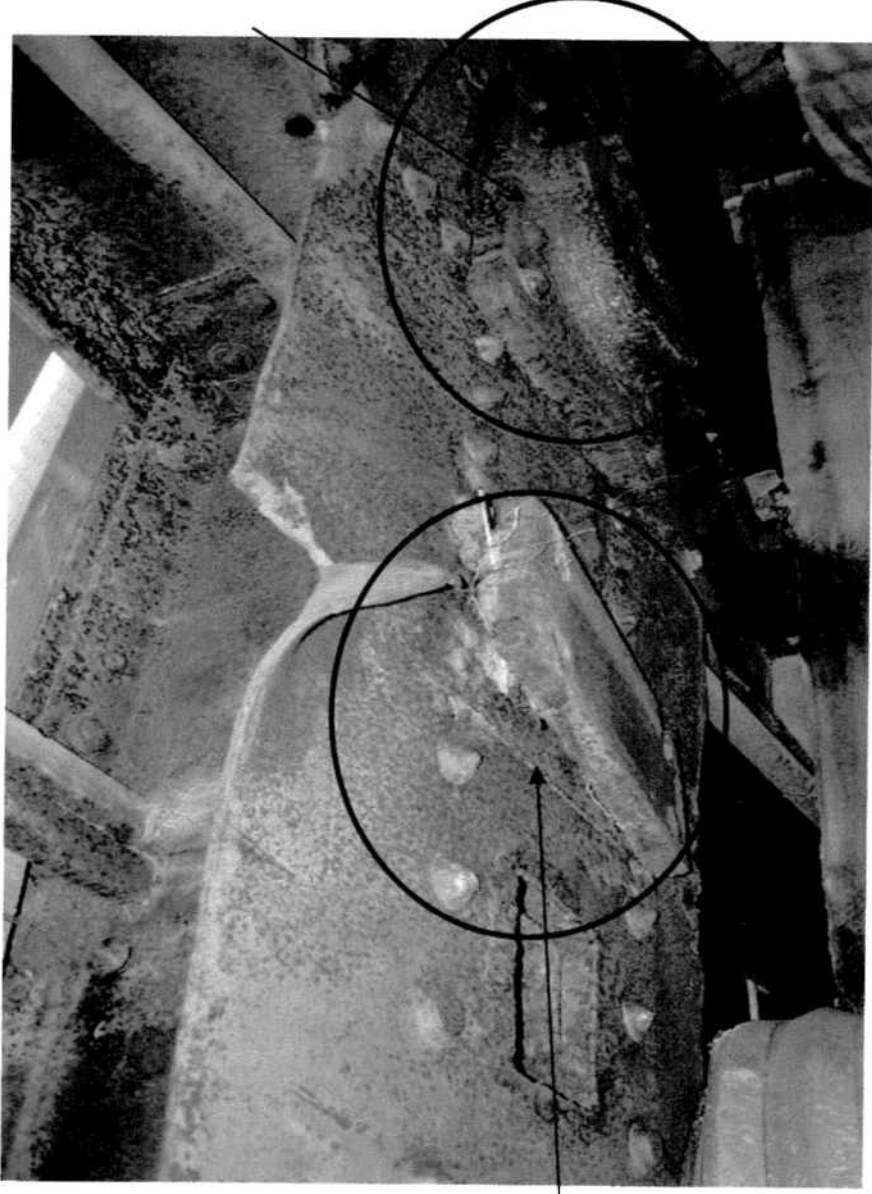
A cracked structural member running the length of the bridge





Damaged Abutments

■ ■ ■ ■ ■
Damaged abutments that by design is supposed to support the end
of the bridge.



Bridge not supported at wheel locations

Damaged Structural member

Photo showing damaged structural member and that bridge is not supported at its wheel locations

